

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1. (Previously presented) A method of inducing formation of regenerable embryogenic cotton callus tissue comprising: obtaining a non-embryogenic cotton callus tissue from a hypocotyl, transforming the non-embryogenic cotton callus tissue with an exogenous nucleic acid sequence, culturing the transformed non-embryogenic cotton callus tissue in a medium under dark lighting conditions of $0 \mu\text{Einsteins m}^{-2}\text{sec}^{-1}$, and obtaining regenerable embryogenic callus tissue therefrom.
- 2-19. (Canceled)
20. (Currently amended) A method of culturing transformed regenerable non-embryogenic cotton callus tissue comprising culturing said cotton callus tissue in a medium containing an antioxidant and an ethylene inhibitor under dark lighting conditions of $0 \mu\text{Einsteins m}^{-2}\text{sec}^{-1}$ to induce a regenerable embryogenic callus.
21. (Original) The method of claim 20, wherein the ethylene inhibitor is aminoethoxyvinylglycine.
22. (Original) The method of claim 20, wherein: the antioxidant is ascorbic acid; and the ethylene inhibitor is aminoethoxyvinylglycine.
- 23-26. (Canceled)
27. (Original) The method of claim 20, wherein the regenerable non-embryogenic cotton callus tissue is derived from callus, hypocotyl, cotyledon, root, petiole, anther, or leaf.
- 28-30. (Canceled)
31. (Previously presented) A method of culturing transgenic cotton embryos comprising: culturing transformed regenerable non-embryogenic cotton callus tissue in a medium containing an antioxidant and an ethylene inhibitor under dark lighting conditions of $0 \mu\text{Einsteins m}^{-2}\text{sec}^{-1}$ to produce transgenic embryogenic cotton tissue; and culturing the

transgenic embryogenic cotton tissue on an embryo maturation medium with a support matrix.

32. (Original) The method of claim 31, wherein the ethylene inhibitor is aminoethoxyvinylglycine.
33. (Original) The method of claim 31, wherein: the antioxidant is ascorbic acid; and the ethylene inhibitor is aminoethoxyvinylglycine.
34. (Canceled)
35. (Original) The method of claim 31, wherein the support matrix is filter paper.
36. (Canceled).
37. (Previously presented) The method of claim 39, wherein the concentration of the amino acid supplement in the medium is between about 10 mg/L and about 500 mg/L.
38. (Previously presented) The method of claim 37, wherein the concentration of the amino acid supplement in the medium is between about 50 mg/L and about 150 mg/L.
39. (Previously presented) A method of culturing regenerable non-embryogenic cotton callus tissue comprising culturing said cotton callus tissue in a medium containing an antioxidant and an ethylene inhibitor under dark lighting conditions of $0 \mu\text{Einsteins m}^{-2}\text{sec}^{-1}$ to produce embryogenic cotton tissue; and culturing the embryogenic cotton tissue in a medium containing a support matrix and an amino acid hydrolysate supplement.
40. (Original) The method of claim 39, wherein the ethylene inhibitor is aminoethoxyvinylglycine.
41. (Original) The method of claim 39, wherein the antioxidant is ascorbic acid; and the ethylene inhibitor is aminoethoxyvinylglycine.
42. (Canceled)
43. (Original) The method of claim 39, wherein the support matrix is filter paper.

44-49. (Canceled)

50. (Previously presented) A method of culturing regenerable non-embryogenic cotton callus tissue comprising culturing said cotton callus tissue in a medium containing an antioxidant and an ethylene inhibitor under dark lighting conditions of $0 \mu\text{Einsteins m}^{-2}\text{sec}^{-1}$ to produce embryogenic cotton tissue; and culturing the embryogenic cotton tissue in a medium containing a support matrix and an amino acid hydrolysate supplement under dark lighting conditions, limited lighting conditions or under green light and wrapped with a sealing material.

51. (Original) The method of claim 50, wherein the ethylene inhibitor is aminoethoxyvinylglycine.

52. (Original) The method of claim 50, wherein the antioxidant is ascorbic acid; and the ethylene inhibitor is aminoethoxyvinylglycine.

53. (Canceled)

54. (Original) The method of claim 50, wherein the support matrix is filter paper.

55- 58. (Canceled)